JOURNAL OF INTERNATIONAL AND AREA STUDIES
Volume 27, Number 2, 2020, pp.113-134

Extended-Deterrent Effect of Russia and Its Implications for the U.S.-N. Korean Nuclear Negotiation*

Jin Myoung Lee

This paper aims to examine whether extended deterrence of Russia over its military allies or trading partners is credible. I argue that alliance commitments of Russia's autocratic leaders with ambivalent deterrence policy are unlikely to deter foreign aggressions. Through the multinomial logit analysis, I have found that there is little evidence that countries that formed military alliances or trade linkages with Russia are likely to increase deterrence success. Rather than hindering disputes, Russia's military alliances are likely to engage in disputes, and more likely in war. Russia's trading linkages have no discernible effect on disputes. These findings imply that faced with the lack of credible alliance, N. Korea could be driven into a hands-tied paradox. To escape this dilemma, the U.S. seems more likely to accept the practical goal, the reduction of the direct N. Korea's threat which may bring about the cold peace in Northeast Asia.

Keywords: Extended deterrence of Russia, nuclear N. Korea, Nuclear weapons, U.S. nuclear negotiations, disputes.

INTRODUCTION

Scholars believed that the key to the U.S. coercive policy for denuclearization of North Korea(hereafter referrered to as N.Korea) was to keep Russia and China, N. Korea's allies, away from N. Korea, and to have them participate in the U.S.-led U.N. sanctions against N. Korea. Finally, in strong support of Russia and China, which had long been Washington's desire, the U.S. attempted to lead N. Korea to disarm nuclear capabilities by holding a series of nuclear negotiations with it from 2018 to 2019. Yet, these compellent and coercive policies have again been in a deadlock without bringing any substantial nuclear weapons dismantling of N. Korea. The U.S. effort to denuclearize N. Korea has already been successful in mobilizing all possible means of international politics.

Therefore, this study attempts to evaluate the role of N. Korean allies, particularly Russia in resolving the N. Korean nuclear crisis, which is at the opposite point of the U.S., the only ally of South Korea (hereafter referrered to as S.Korea). Policy makers are largely focusing on China's role in the solution to the N. Korean nuclear crisis, based on China's strong economic and military influence over N. Korea today, and not on Russia. It is undeniable that China is an important factor in explaining the N. Korean nuclear crisis as a military alliance in North Korea, but Russia is also an important actor who cannot be missed from a strategic point of view.

Particularly, Russia is a key country that has driven N. Korea to weaponize nuclear technology from a perspective of balance with the U.S., and it is a country that cannot be

* This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea(NRF-과제번호)(NRF-2018S1A5B5A07074036)
* The author thanks anonymous reviewers for their great comments.

disregarded in evaluating the denuclearization problem of N. Korea today. In the early stages of North Korea's nuclear development, it was just Russia, not China that provided N. Korea with the chance to weaponize nuclear technology (Lee 2009, 12).[1] In response to the US nuclear deployment in S. Korea, the Soviet Union began signing a formal agreement with N. Korea to cooperate in nuclear research. Furthermore, from 2003 through 2007, Russia participated in the six-party talks to resolve N. Korean nuclear issue. Therefore, Russia is one of critical countries that cannot be ignored in solving the N. Korean nuclear issue, and it is practically significant to evaluate Russia's role as a military alliance of N. Korea. So, this paper aims to analyze the reliability of the Russian alliance, thereby suggesting its policy implications for the U.S.-N. Korean nuclear negotiations.

A serious question in the N. Korean nuclear crisis issue is whether N. Korea is more likely to undergo complete denuclearization in exchange for security guarantee or economic gains committed by the U.S. There are, however, some logical inferences that this U.S.-led security assurance on N. Korea approach may not prompt N. Korea to dismantle its nuclear capabilities completely (Lee 2020, 75-76). First, it has been increasingly visible that N. Korean nuclear capabilities resulted in what structural realists have consistently predicted on nuclear deterrence, reaching the unprecedented equilibrium of mutual fear between N. Korea and the U.S. Since 2018, a series of remarkable diplomatic breakthroughs between the U.S. and N. Korea led N. Korea to halt nuclear testing and missile launches in exchange for stopping or downsizing the U.S. military drills with S. Korea. What most surprises the world is that all those frequent militarized disputes in the Korean peninsula for the last 70 years end up being controllable and man-made under nuclear equilibrium between N. Korea and the U.S. Accordingly, the complete denuclearization of N. Korea is to return Northeast Asia to its former unstable nuclear asymmetry which will push N. Korea into the most vulnerable security position. Overall, it is not easy to expect N. Korea to go back to the security vulnerability by abandoning its nuclear capabilities. Second, without regard to the intentions of Russia or China, N. Korea's nuclear and missile capabilities are a useful means of balancing the U.S. within the region. Against the deployment of U.S. tactical nuclear weapons on the Korean peninsula in 1958, Russia provided the beginning of North Korea's nuclear development by signing an official agreement with North Korea to cooperate in nuclear research. In 1965, North Korea began operating the Yongbyun Nuclear Scientific Research Center. This was only a power plant, but Kim Il Sung became over-interested in weaponizing the nuclear technology (Oberdorfer and Carlin 2013, 196-69). With the Soviet help, N. Korea constructed its first nuclear reactor at Yongbyun in 1965 which was later expanded to eight-megawatt output in 1974. It eventually became the focus of the U.S. suspicions of a nuclear weapons effort in the 1980s (Lee 2009, 12). In sum, in support of the Soviet Union, the N. Korean nuclear armament directly challenges the U.S. backing S. Korea with its tactical nuclear deployment for 1958 to 1991 or military presence since then. Finally, N. Korea's complete denuclearization would be its unconditional surrender. By forcing N. Korea to comply with full denuclearization, the U.S. aims to consolidate its hegemony over Northeast Asia. Therefore, it is not reasonable to expect that N. Korea fully disarms its nuclear capabilities in accordance with these U.S. forces and threats-based coercive policies, considering today's Northeast Asia, where Russia and China's hegemony competition against the U.S. is becoming visible.

[1] Shortly after China's atomic test in 1964, N. Korea asked for assistance to develop nuclear weapons, but China turned down the N. Korean request.

Empirically, however, from the liberal point of view, there may be the dimmest chance for N. Korea to abandon its nuclear capabilities. Liberals, adopting the Helsinki process, suggest that its allies such as China or Russia are more likely to ease its complete denuclearization by credibly extending their deterrence over it as the U.S. has been doing for S. Korea and Japan (Bobbit 2018). Their resolutions include declaration of the end of the Korean War and internationally recognizing current borders inviolate and current regimes. In the core of the proposal, Russia or China could play a decisive role on providing reliable extended deterrence to N. Korea against the U.S. and its allies in exchange for N. Korean denuclearization under the U.N. inspections. It is well-known that the US security assurance has successfully curbed the development of nuclear weapons in Taiwan in 1950s, Japan in 1960s, and S. Korea in 1970s.

A related and more serious question of this suggestion is if Russian alliance is credible for its proteges. In the interdependent decision-making process of nuclear bargaining (Shelling 1996), it is assumed that the U.S. and N. Korea mutually well recognize a variety of options and logics left and applicable to both sides. If extended deterrence of Russia turns out to be credible, N. Korea is expected to likely abandon its nuclear program in the U.S.-N. Korea nuclear negotiations. Otherwise, N. Korea is expected to take more reciprocal approach, calling for more significant political and economic concessions from the U.S. and S. Korea that correspond to the N. Korea's phased dismantlement of its nuclear program.

Russia had provided nuclear-extended-deterrence to its allies such as N. Korea from 1961 to 1994 and China from 1949 to 1960. Yet, we never were able to verify the reliability of the extended deterrence of Russia over its allies. Accordingly, in the extreme security vulnerability in Northeast Asia, it is practically significant to address the question of whether extended deterrence of Russia on its military allies and trading partners is reliable, thereby providing policy implications for the U.S.-N. Korean nuclear negotiations.

In the following, I review the debate on extended deterrence and construct my hypotheses. The third section delineates the changing pattern of the deterrence policy of the Soviet Union. The fourth and fifth sections suggest research design and examine the hypotheses, by employing a statistical model. Finally, the last section demonstrates what the findings imply for the contemporary Northeast Asian security, particularly in dealing with N. Korean denuclearization talks.

II. DETERRENT EFFECT OF NUCLEAR WEAPOLNS AND ALLIANCE

Deterrence theories have devised and evolved in the context of nuclear weapons developed during the Cold War. In theory, the logic of extended deterrence traditionally claims that the credible threat of a defender is the major determinant of deterring attackers to its allies. Conceptually, general deterrence is differentiated from immediate one, which concerns "the relationship between opposing states where at least one side is seriously considering an attack while the other is mounting a retaliatory threat to prevent it" (Morgan 1977, 9). In contrast, extended-general deterrence refers to an attempt of a defender to deter an attack on its allies in a situation that there is persistent underlying military confrontation, but no clear and present danger of dispute initiation between its allies and opponents. Defenders primarily pursue preventing initiators from accelerating peacetime diplomacy into military disputes against their allies by employing credible retaliatory threats of military forces. A typical case in point is that since 1953, the U.S. has maintained its military presence

in S. Korea under a defense pact to prevent N. Korea from initiating another dispute against S. Korea (Huth 1999, 27).

Structural realists assume that asymmetric power relations are the major source of interstate disputes (Waltz 1993; 2000; Mearsheimer 1990). This assumption is applied to the expected utility or game theoretic explanation of a war between nuclear states as a chicken game (Schelling 1960; 1966). Later empirical studies found significant pacifying effect of nuclear weapons (Danilovic, 2002; Zagare and Kilgour, 2000; DeNardo, 1995; Huth, 1990; Waltz, 1993; Glasser, 1992; Huth and Russett, 1993; Gaddis, 1987; Coale, 1985), but early studies didn't (Huth and Russett 1984; Organski and Kugler 1980). Particularly, some realists view that nuclear weapons make state behaviors more cautious as shown in the Soviet Union and China which were once rogue states (Waltz 1995, 39). Hence, N. Korean nuclear armament was assumed to promote peace in the region (Waltz 1995, 38-40).

Most empirical studies on extended deterrence address the question of whether a defender engages in crisis to support its allies. Most of them have paid significant attention to examining immediate deterrence (Danilovic 2002; Huth 1990; Huth and Russett 1984; Organski and Kugler 1980), but a few on general deterrence (Huth and Russett 1993) because of the problem of identifying when a challenge might occur and which states are potential defenders and attackers of which targets.

Recently, scholars pay significant attention to the compellent effect of nuclear weapons (Shelling 1966, 69-91), contending that nuclear weapons have coercive power regardless of opponents' capabilities. Running a statistical analysis, they find that nuclear states are more likely to end disputes without violence and more severe violence is less likely in crises with nuclear opponents (Asal and Beardsley 2007, 149-150). Their subsequent study reveals that nuclear states are more likely to prevail over nonnuclear ones(Asal and Beardsley 2009a). Their subsequent research discloses that nuclear weapons do confer observable benefits to the possessor by making them less likely to be targets of violent aggression (Asal and Beardsley 2009b: 253). These findings imply that the restraining effect of nuclear weapons is the successful outcome of coercive diplomacy. Also, emphasizing the importance of nuclear superiority for compellence success, the latest research suggests that states with nuclear superiority over their nuclear inferior rivals are more likely to achieve their basic goals in nuclear crises. The empirical analysis on the fifty-two nuclear crisis dyads reveal that nuclear superior states are more likely to win nuclear crises because they are willing to run a greater risk of nuclear war than their nuclear inferior opponents (Kroenig 2013). Challenging this argument of compellent effect of nuclear weapons, researchers assume that nuclear weapons could have a discernible deterrent effect against aggression, but have no compellent effect because they are not useful means for disputes, nor are they cheap tools for punishing the opponent (Sechser and Fuhrmann 2013, 174). The statistical analysis on 200 compellent cases uncovers that compellent threats of nuclear states are less likely to succeed than nonnuclear. Furthermore, the follow-up statistical analysis on 210 compellent threats and case studies on many historical compellent threats, disclose that nuclear weapons have no significant coercive advantage (Sechser and Fuhrmann 2017).

In the extant literature, empirical studies on the extended deterrent effect of military alliances were conducted in the context of structural realism as well. Overall, the findings of empirical research on the deterrent effect of alliance are mixed, and sharply at odds. Studies that have noted the negative extended deterrent effects of alliances have disclosed that alliances serve as a tool for aggression to belligerent countries (Altfeld & Bueno de Mesquita 1979; Sabrosky 1980; Siverson & King 1980; Oren 1990) and moral hazards

such as increased recklessness due to alliances (Snyder & Diesing 1977; Snyder 1984; 1997; Christensen & Snyder 1990; Smith 1995; Yuen 2009) were seen as increasing the war probability. The alliance is to make leaders reckless to entrap it even in wars they really want to avoid (Snyder 1984; 1997; Christensen & Snyder 1990). There are also empirical studies that explain the peace or conflict tendency of the alliance according to the characteristics of the countries that make up the alliance. Statistical analysis revealed that the alliances that realize the settlement of territorial disputes are the most peaceful, and that the alliances that include superpowers or those that have recently won wars are vulnerable to war, and vice versa, peaceful (Gibler & Vasquez 1998). In another study, statistical analysis shows that the deterrent effect of the alliance is different according to its purpose. In other words, it was found that the coercive alliance is highly vulnerable to conflict, while the deterrent alliance is very unlikely to dispute (Benson 2011).

Studies that have focused on the positive deterrent effect of alliances are largely divided into factors of their deterrence success. Traditionally, studies view the military power and commitment of defenders as the main determinant of the deterrence success to their allies. The traditional defender-centered explanation about extended deterrence of the alliance uses various operational indexes for military power (Glaser & Kaufmann 1998; Huth 1988; Mearsheimer 1983; Russett 1963), national reputation for resolve (Schelling 1966), and national interest (Lieberman 1994; Bar-Joseph 1998; George & Smoke 1974; Maxwell 1968).

Based on the signal approach, this paper aims to explain the deterrent effect of the alliance. The signal approach views extended deterrence as a negotiation process and focuses on the role of alliance in terms of motivation for alliance formation. The role of alliances is seen as a signal that alliances can be used in terms of political relations between alliance partners to establish the validity of commitments to deter aggression (Smith 1998; 1995; Fearon 1997; Morrow 1994; 2000; Huth 1991). The point is that the alliance itself acts as a deterrent signal, suppressing the enemy against it. Based on this signal theory, empirical evidence of the existence and institutional design of alliances has been presented (Chiba, Johnson, Leeds 2015; Poast 2013; John and Leeds 2011; Leeds 2003).

When war is explained as a negotiation process between rational states, the major concern lies on credible communication. The logic of extended deterrence emphasizes the importance of the threat credibility of defenders, which is assumed to lead aggressors to change their perception of targets. Here, researchers pay significant attention to the signal approach to inform the aggressors of the intention of the threat of the use of military force. For example, defenders are assumed to enhance their threat credibility by leaving behind the signal that the negotiation process is not completely controllable (Shelling 1960, 187-203). The main causes of war are asymmetric information about relative power and resolve about opponents, and wrong negotiation strategy to obtain gains by using it and commitment problems in which gains are generated with the breach of the agreement (Fearon 1995, 390-401). The dilemma of the threat credibility of the use of military forces comes largely from the fact that the threatened are unable to directly observe the preference of the threatening states and that they know that the threatening take gains by pretending to be resolved in the use of military forces (Fearon 1997, 69). This dilemma could be addressed when the threatening sends to the threatened the threat which is costly or risky to the extent that they must unwillingly pay for it. The threat of the use of the military force becomes credible to the threatened when it is transformed into a costly signal. One way to make a signal costly is to generate audience cost that fatal loss is generated when the threat or warning declared officially in crisis is backed down. This idea was examined logically in comparison of tying hands signals such as alliance

or trip-wire troops of defenders as the examples of costly signals to generate high audience costs with sunk-costs such as military build-up or mobilization of defenders, which prompt relatively no cost (Fearon 1997). It is found that the tying-hands signal of a defender is more likely to generate a high level of threat credibility for its alliance protégé by working as a signal of its determined resolve than the sunk-cost signal while it does not prompt much cost by itself (Fearon 1997, 82). By contrast, the tying-hands signal strategy is more likely to lead defenders to engage unwillingly in disputes because they attempt deterrence by committing the use of the military forces (Fearon 1997, 81). In the similar vein, the expected utility logic claims that a military alliance is a signal of strong deterrence. The decision for the aggressor to initiate the target depends heavily on whether targets have allies or not. When defenders are significantly influenced by the outcome of the war, they are expectedly more likely to assist its allies, otherwise not (Bueno de Mesquita 1981, 56).

In the beginning, the extended deterrent effect of the alliance has been analyzed with militarized disputes between allies of the U.S. and the Soviets (Weede 1983). Besides, statistics of the relative dispute frequency indicates that mutual nuclear deterrence is evident between nuclear powers as well as their allies (Siverson and Tennefoss 1984). Recently, as a full-scale study based on the signal theory of alliances, the results of the statistical analysis have shown that attackers are less likely to initiate targets when targets have defensive alliance while they are more likely to initiate targets when they have an aggressive or neutral alliance (Leeds 2003). Another statistical analysis reports that alliances with major powers, high levels of military cooperation, similar foreign policies, and institutionalized structure are less likely to be targeted (Johnson et al. 2012). Also, it is found that combining multiple issues into a single agreement enhances the credibility of alliances, as examined in buffer states in alliances with trade provisions experiencing fewer opportunistic violations of the alliance terms and fewer attacks (Poast 2012). Scholars contend that democratic states are more careful to design alliance agreements to deter adversaries. They assume that how usefully the formal alliance is designed determine whether states with the alliance are less likely to be targets of militarized disputes or not (Chiba et. al. 2015, 969). Conducting the empirical analysis on 536 alliance agreements from 1815 to 2003, they find that alliances between democracies are more likely to include obligations for future consultation rather than active assistance. Also, defense pacts between democracies are more likely to specify limits to the conditions under which defensive obligations are invoked.

What has been missing in the existing literature on the deterrent effect of nuclear weapons and alliances is the lack of empirical analysis on individual major powers, which are the key actors in shaping contemporary world politics. In fact, in international conflict, the actual behavior of most states, particularly major powers disclose serious discrepancies between theory and practice (Waltz 2000; 1993; Zagare and Kilgour 2000; Gaddis 1995; Jervis 1988). Accordingly, the findings from empirical analyses about extended deterrence against all nuclear powers call into question their applicability to the real world. The theoretical usefulness of extended deterrence is more likely when the empirical analysis on extended deterrence pursued by individual superpowers is carried out, respectively.

III. RUSSIA UNDER AUTHORIAN REGIME AND AMBIVALENT DETERRENCE POLICY

I postulate that security assurances of Russia are unlikely to deter foreign aggression to

their military allies or trading partners. I first argue that the alliance commitments of Russia's authoritarian leaders to protect their military protégés or trading partners are not effectively believable to aggressors. In addition, I assume that the ambivalent deterrence policy over Russia's allies is not credible to aggressors.

When the logic of the costly signal approach is applied to the case of Russia, security guarantees of Russian leaders under long-standing authoritarian regime over its allies are not credible to aggressors. Polity IV country report shows that Russia has significantly developed democratic mechanisms, particularly being altered from the Soviet Union (Gurr and Jaggers 2016).[2] Yet, as of 2010, it still remains autocratic in its regime trends.[3] Before 1989, the Soviet Union was categorized as an autocratic regime, displaying constantly the level of -7 among ranges from -10 to 10 according to the Polity IV country. From 1989 to 1990, the Soviet Union was transformed to the Russian Federation, representing the sharp increase in its regime trends to 5 and 6 at the peak around 2005. Regarding executive recruitment, Russia accomplished its first peaceful and democratic transfer of executive power in its history as President Vladimir Putin was elected in 2000. Yet, the long-lasting presence of Putin in the presidency and his apparent indifference to democracy become a source of concern for supporters of political liberalism which reflects democratic norms and institutions in their infancy. Polity IV defines executive constraints of Russia as moderate limitations. Russia has seen the formation of numerous political parties, but few have been substantial or lasting which represents that Russia's parties are weak and fluid in nature. While no oppositional parties were restricted in their activities, opposition parties have the inability to design a common platform and alliance which to more effectively challenge the President's position. As a result, as of 2010, Russia's democratic level is defined as 1 and its autocratic level as 5. Overall, while Russia has accomplished unprecedented democratic transition, it is coded as 4 which represents an autocratic regime.

In the audience cost logic, leaders can credibly communicate their intentions because their domestic political survival resorts to their ability to honor their commitments. Accordingly, "absolute rulers, who cannot be removed, cannot communicate their intentions to other nations" (Smith 1998, 632). Autocratic leaders who are less likely to jeopardize their domestic political prospect have less audience costs than electorally vulnerable democratic leaders. In sum, foreign policy statements of autocratic leaders of Russia (Soviet Union) are unlikely to deter foreign aggression because the pledge to intervene is not credible.

Also, I assume that the ambivalent deterrence policy over Russia's allies is not credible to aggressors. Hence, I posit that effective extended deterrence of Russian alliance is unlikely. In the early days, the Soviet Union developed the concept of deterrence through refusal while the U.S. emphasized it through retaliation. Overall, compared to the nuclear-oriented deterrence policy of the U.S., centering on deterrence through retaliation, Russia adopted relatively refusal-oriented deterrence policy. During the Stalin era, the military strategy centered on the ground forces and treated nuclear weapons as complementary means. The reason why Russia emphasized the importance of the conventional weapons-oriented deterrence policy is that it mainly aimed at annexing comprehensive Western Europe. Contrary to the U.S., which has attempted to restrict its battlespace, Russia has rather expected to expand it, but in principle, pursued any type of war (Freedman 2003, 105). Also, this conventional weapons-oriented policy states the defensive characteristic to defend

[2] http://www.systemicpeace.org/polity/Russia2010.pdf.

[3] https://www.systemicpeace.org/polity/rus2.htm.

its territory (Freedman 2003, 243). After the mid-1950s when Nikita Khrushchev came to recognize the possibility of all-out nuclear war, Russia transformed to the defense system centering on nuclear weapons, developing the ICBMs and unmanned spacecraft earlier than the U.S. He led the Soviet to adopt an offensive strategy that defined the first use of nuclear weapons to compensate for the conventional weapons in the lower quality in the early 1960s. In the 1960s, Robert McNamara established a concept of assured retaliation, which implies assured destruction and mutually assured destruction. The reciprocal fear about initiation is deterred by the retaliatory capability. When both parties maintain assured retaliatory capability, they could reach a stable equilibrium of fear (Freedman 2003, 236). McNamara viewed that the more similar the mutual understandings and principles could produce the better Soviet-U.S. relations managed well (Freedman 2003, 235). The Soviets adopted the U.S.-led mutually assured destruction theory. In 1968, the Soviets signed the non-proliferation treaty. Then, the Soviets started to agree to reduce the useless nuclear weapons based on the assured retaliatory capabilities. Of course, when the U.S. deployed tactical nuclear weapons in Europe along with the flexible response policy devised by McNamara, the Soviets came to reemphasize the importance of the conventional weapons. By the 1980s, Soviet leaders came to believe that nuclear war was winnable with the first strike, unrestraint, and superior number policies (Fravel and Medeiros 2010, 57). Russia was therefore able to hold Western Europe in hostage. At the time, Russia tried to advance its retaliatory capability by dispersing the deployment of strategic weapons. In the late 1980s, Mikhail Gorbachev emerged, suggesting the concept of the global common security, contending the ultimate dismantlement of nuclear weapons.

Overall, Russia has posed ambivalent extended-deterrence policy over its allies. On the surface, Russia provided East European and Asian allies with security assurances as the U.S. has done to her allies in the NATO, Middle East, and East Asia. Yet, the Soviet invasion of Hungary (1956), Czechoslovakia (1968), and Afghanistan (1979) all are the clear reflection of its willingness to use violent forces to its allies. Contrary to the extended-deterrence policy of the U.S., Russia has never officially declared its extended-deterrence policy, thereby remaining undefined on that policy.

Of course, in the great turmoil of the 1990s, as Russia's weakness in most other measures of global power and influence, including its vulnerable geostrategic position and inferior general-purpose forces and cutting-edge military technology was disclosed, Russia came to perceive nuclear weapons as the key security guarantee and an intrinsic attribute of great power (Rojansky 2013, 297-99). In 1993, Russia took a more aggressive nuclear posture by dropping the no-first-use policy adopted in 1982 (Schmemann 1993). Furthermore, the 2000 military doctrine states that Russia reserves the right to utilize nuclear weapons in response to conventional weapons against it and its allies (Sokov 1999). Since 2010, Russia allowed nuclear weapons to be used in the very existence of Russia under threat. It might assign nuclear weapons to local conflicts, which would have represented a massive expansion of the role of nuclear weapons in Russian security policy (Sokov 2010). Also, Russia dropped the pledge that it would not employ nuclear weapons against NPT-states without nuclear weapons (Russian Federation Ministry of Defense 2015). Furthermore, its 2010 military doctrine declared the limited use of nuclear weapons when Russia or its allies are initiated with nuclear weapons or other weapons of mass destruction (Quinlivan and Oliker 2011, 18).

But with the dissolution of the Warsaw Treaty Organization and the Soviet Union, half of its withdrawal states and allies have joined the NATO. Scholarship identified total 9 nuclear-extended-deterrence cases provided by the Soviet during the Cold War, such as China (1949-

60), Albania (1955-91), Bulgaria (1949-89), Czechoslovakia (1955-91), East Germany (1955-91), Hungary (1949-89), Poland (1949-89), Romania (1949-89), N. Korea (1961-94) (Rapp-Hooper, 2015: 9). Besides, a total of five extended-deterrence cases provided by Russia after the Cold War are identified as such Armenia (2001-present), Belarus (2002-present), Kazakhstan (2002-present), Kyrgyzstan (2002-present), and Tajikistan (2002-present). Yet, in 1997, former Soviet allies of Hungary, the Czech Republic and Poland joined the NATO. In particular, Belarus, Kazakhstan, Kyrgyzstan, Tajikistan, members of the CSTO, which are security allies of Russia, are defined as partners of the NATO. Accordingly, extended deterrence of Russia over her allies is still ambivalent. It is thus necessary to be explicitly defined one way or another because it is not just by-product of alliance relationship.

In sum, I argue that security assurances of Russia over its military allies are not credible due to it long-lasting autocratic regime and its ambivalent deterrence policy. I construct a hypothesis with the testable implications as follows:

H1, A country that forms a military alliance with Russia is unlikely to increase deterrence success against its enduring rivals.

The costly signal logic can be applied to extended deterrence of Russia over its trading partners as well as military allies. Traditionally, the liberal hypothesis on trade and conflict implies that trading partners are abstained from involving in disputes due to the fear about the dispute cost outweighing the trade gains (Hegre et al 2010; Gelpi and Grieco 2008; Mansfield and Pollins 2001; Oneal and Russett 1999; Russett et al 1998; Oneal and Russett 1997; Barbieri 1996). The role of economic interdependence has been empirically analyzed largely in the cases of extended-immediate deterrence (Huth and Russett 1984; Huth 1988; Danilovic 2002; Signorino and Tarar 2006). Recently the extended general deterrent effect of trade relations was analyzed between members of regional trade organizations (Aydin 2010).

The costly signal theory assumes that militarized disputes break out when the will of initiation between states comes into conflict. Here, disputes are not just the results of the confrontation of relative power, but of the competition of relative resolve between rivals. As illustrated in the extended-deterrent role of alliance states with close trade linkages seem to have the abundant means to signal explicit intention to pursue costly actions like the loss of trade gains in crisis. Countries in close trade relations are expected to avoid militarized disputes because they exchange these costly signals (Morrow 1999, 487). It is more effective to exchange signals between democratic states because they are assumed to have higher audience costs (Fearon 1997). Recent research empirically examined that the interdependent relations in the capital market as well as trade linkages decrease the uncertainty of relative dispute resolve and weaken the necessity of disputes because they are at work as costly signals (Gartzke et al 2001).

In addition to the military alliance, the costly signal approach views that trade linkages are more likely to deter militarized disputes between states due to their signal characteristics. Conventionally, it is mainly assumed that the pacifying effect of trade relations arises from the substitution effect of trade loss. That is, trade partners are assumed to abstain from involving in disputes due to the fear about the cost of the dispute outweighing the trade gains. Based on this causal mechanism, most empirical research has paid significant attention to the deterrent effect of trade linkages. Besides, the role of economic interdependence has been empirically analyzed largely in the cases of extended-immediate deterrence (Huth and Russett 1984; Huth 1988; Danilovic 2002; Signorino and Tarar 2006). The closeness of

political relations is reflected in economic relations. “States in very close relations do not have to form alliances to show that they share interests” (Morrow 1999, 488). Yet, a few researchers have analyzed the role of economic relations in general extended deterrence.

When the costly signal logic is applied to Russia, the expectation of extended deterrence of Russia over its trading partners goes into reverse because Russian leaders under the autocratic regime who are assumed to be electorally invulnerable have lower audience costs. It is more effective to exchange signals between democratic states because they are assumed to have higher audience costs (Fearon 1997). When Russian leaders send a signal to initiate some threats to use military forces or to sever trade linkages against targeted aggressors to protect their trading partners, those aggressors do not interpret these threats as a credible signals with high probability of dispute outbreak because they do not mortgage their domestic political survival on their ability to honor their commitments. In sum, to examine extended deterrence of Russia, I construct a hypothesis with the testable implications as follows:

H2: A country that has formed trade linkages with Russia is unlikely to increase deterrence success against its enduring rivals.

IV. RESEARCH DESIGN

To test the above hypotheses, I constructed a research model containing a dependent variable of dispute occurrence between an attacker and target, two independent variables of military allies and trading partners with Russia and its protégés, and control variables of relative capability, geographical proximity, joint democracy, and post-cold war. The unit of analysis is dyad/year over the period under the analysis of 1950-2001, which is based on the accessibility of data. Utilizing the Eugene Expected Utility Generation and Management Program,[4] I constructed a pooled time series-cross sectional data set, based on the enduring rivalry data set (Klein et al 2006). What is the most challenging in quantitatively analyzing the effect of the general-extended-deterrence of the Russian alliance is to identify the cases of extended-general deterrence which calls for clarifying when a challenge might occur and which states are potential defenders and attackers of which targets. One way to minimize the wrong samples is to employ the enduring rivalry data set. Deterrence is an attempt to prevent others from challenging the status quo. Hence, deterrence is not targeted to countries that are satisfied with maintaining the status quo. That is why I employ the enduring rivalry dyad that reflects explicitly long-standing hostile countries. The data set excludes cases where the absence of attack can meaningfully be considered general deterrence success. Another challenging part of this research is the work to combine the information of the military allies and trading partners of Russia.

In my research model, the dependent variable is the deterrence success or failure, which is measured with the absence or occurrence of militarized disputes in a dyad, respectively. Scholars define deterrence in a narrow sense, mainly including military means (Freedman 2004; Morgan 2003; 1983; Huth 1988), rarely to a broad sense, including non-military means such as economic sanctions and diplomatic exclusion (Russett 1963). In essence, deterrence is to manipulate opponents’ behavior by threatening them with harm. “The behavior of

[4] Eugene Expected Utility Generation and Data Management Program (Version 3.204). http://eugenesoftware.org/

concern to the deterrer is an attack; hence, deterrence involves the threat of force in response as a way of preventing the first use of force by someone else" (Morgan 1983, 11). Also, deterrence is defined as "a policy that seeks to persuade an adversary, through the threat of military retaliation" (Huth 1988, 15). For clarity, it is opposed to including nonmilitary tools in defining deterrence (Morgan 2003, 119). As the narrowest definition, deterrence is a military means of statecraft (Freedman 2004, 36-40). In this study, I focus on interstate aggression to specify the extended deterrent effects of nuclear weapons and military alliances.

The dependent variable is operationalized with the 3-point scale dispute categories consisting of *no occurrence of disputes*, *low severity disputes*, and *war*, based on the Dyadic Militarized Interstate Disputes Data of Correlates of War Project (MID) (Palmer et al 2015). The MIDs are defined as "united historical cases of conflict in which the threat, display, or use of military force short of war by one member state is explicitly directed towards the government, official representatives, official forces, property, or territory of another state" (Jones et al 1996). In the international conflict field, the MID data have become a widely used resource, and most recent research on dyadic interstate conflict tends to look at MIDs, including wars. In model 1, I transform 5-point scale outcome categories in the MID data set to a 3-point scale by defining *threat, display*, and *use of forces* as one *low severity dispute*. Now, the redefined 3-point scale variable ranges from *no occurrence of disputes* coded as 0, *low severity disputes* as one of *threat, display*, or *use of forces*, coded as 1, to *war* coded as 2.

Some may question that this conceptualization of the dependent variable does not capture the realities of nuclear deterrence because nuclear deterrence is qualitatively different from conventional deterrence (Waltz 1998, 625). Yet, there are empirical and logical bases for not requiring an analytical distinction between nuclear and conventional deterrence. Empirically, there is evidence that nuclear weapons do not restrain the hostility (Organski and Kugler 1980) or escalatory behavior of non-nuclear states (Geller 1990; Paul 1994). Logical defects are attributed to the classical deterrence theory that nuclear warfare is the worst possible outcome for all sides. If conflict - nuclear or conventional - is the worst outcome, deterrence cannot ever be successful because any attacked state will always capitulate rather than fight, and knowing this, challengers will always attack (Quackenbush 2011). Put together, this paper is based on the argument that the deterrence theory should focus on general explanations of the dynamics of deterrence rather than the limited explanation of nuclear or conventional deterrence.

The research model has two independent variables: the military alliance and trade relations between Russia and the target. The credibility of Russia's extended deterrence is measured with the deterrent effect of a country with Russian military alliance or trade linkages on the MIDs against its enduring rivalries. If extended deterrence of Russia is credible, a country with Russian military alliance or trade linkage is less likely to engage in militarized disputes against its enduring rivalry. For the operational index of the military alliance, in a dyad of an attacker and target, when the target is engaged in a defensive pact, a neutral pact, or entente with Russia, the dyad is coded as 1, otherwise 0. Alliance data is based on the COW Formal Alliance v4.1 (Gibler 2009). Trade linkages between Russia and its protégés are measured by using the natural log of their bilateral trade share of Russia's total trade, utilizing the Trade v4.0 of the COW Project (Barbieri et al 2009).

I controlled for *relative capabilities* between an attacker and target in my dependent variable. Relative capabilities are measured with the natural log of the sum of the capabilities of the two countries in dyad. The national capability data is obtained from the COW Project National Material Capabilities v5.0 (Singer et al 1972). *Geographical contiguity* is another

control variable. Contiguity is found most significant in increasing the likelihood of disputes. The contiguity is defined with direct proximity ranging from two states with touching borders to those states separated by 400 miles or less of open water. Noncontiguous states are thus less likely to engage in disputes. This dichotomous variable is coded as 1 if two states are contiguous, otherwise as 0. Contiguity data is derived from the COW Project Direct Contiguity Data, 1816-2016, v3.2 (Stinnett et al. 2002). Contiguity is expected to be positively associated with dyadic disputes. Many studies have found that conflict between democratic systems is minimal (Bennett and Stam 2004; Maoz and Russet 1993; Dixon 1994; Bremer 1992). Using data from the Polity IV data set (Marshall et al. 2018), a variable measuring the level of joint democracy in a dyad is constructed. The *Joint democracy* variable ranges from zero to one hundred and is calculated in the following formula: Joint Democracy*ij*= {(Democracy*i*-Autocracy*i*+10)/2} × {(Democracy*j*-Autocracy*j*+10)/2}. I expect a negative relationship between *Joint Democracy* and the occurrence of dyadic disputes. Finally, I added controls for *Post-Cold War* in disputes because inter-state disputes are generally on significant decline since the collapse of the cold war.

V. ANALYSIS AND EVALUATION

To test the hypotheses constructed above, I conducted a multinomial logit regression analysis due to the dependent variable consisting of the 3-point scale outcome categories of militarized disputes: *no occurrence of disputes*, *low severity disputes*, and *war.* In practice, militarized interstate disputes have two kinds of inherent tendencies. Those disputes are interdependent between precedent and follow-up events and are very rare, which violate the underlying assumptions for the statistical regression model. To address these problems, I utilize the duration dependent technique with peace-year and three cubic splines variables from the BTSCS algorithm (Beck et al. 1998). In the logit model, no single interpretation method can lead to fully delineate the relationship between variables and outcome because the logit model is nonlinear. I present the factor change in the odds as shown in Table 1 and interpret the direction and magnitude of the impact of independent variables.

Table 1 addresses my main research question of whether military or economic ties with Russia under ambivalent deterrence policy are likely to inhibit disputes for the period of 1950-2001 under analysis in *enduring rivalry dyads*. When all control variables are held constant on their average for continuous or 0 in binomial ones, these results are interpreted as follows.

Overall, as I expected in the hypotheses, the results of the statistical analysis show that countries that have formed military alliances or trade linkages with Russia are unlikely to increase deterrence success. Direct evidence to support the primary hypothesis of this paper was disclosed in the variable of *Russia's military allies*, which significantly increase the likelihood that dyads engage in *war*. Countries that have formed military alliances with Russia are far more likely to engage in *war*. Both *Russia's military allies* and *trading partners* had no significant impact on *disputes* (*threat, display, and use of military forces*). Similarly, Russia's trading partners had no discernible effect on *war* and the combined effect of *Russia's military allies* and *trading partners* was not significant on *disputes* and *war*. Hence, I could conclude with confidence that there is little evidence that extended deterrence of Russia over its military allies or trading partners is credible.

Firstly, and most importantly, the results of the statistical analysis reveal that, rather than

Table 1. Extended-deterrent effect of Russia over its military allies and trading partners on disputes in enduring rivalry dyads, 1950-2001

	Disputes (Threat/Display/Use of forces)		War	
	Coefficient	p>|z|	Coefficient	p>|z|
Russia's military allies	0.38	0.18	1.43	0.00***
Russia's trading partners	0.68	0.39	0.49	0.70
Russia's allies*partners	1.33	0.90	-6.81	0.57
Major power	-0.50	0.01*	0.43	0.19
Relative power	-0.02	0.94	-1.31	0.06
Proximity	0.61	0.04*	-1.08	0.00**
Joint democracy	-0.00	0.23	0.00	0.41
Post-Cold War	0.23	0.17	-0.09	0.78
Peace years	-1.17	0.00***	-1.93	0.00***
spline1	-0.00	0.00**	-0.00	0.01*
spline2	-0.05	0.00***	-0.08	0.00***
spline3	0.01	0.00***	0.02	0.00***
Constant	-0.19	0.60	-0.77	0.14
Number of observations =1676 LR chi2(24)=545.35 Probability>chi2=0.000 Log likelihood=-1010.937 Pseudo R2=0.212				

* p<0.01, ** p<0.001, *** p<0.0001

hindering disputes, *Russia's military allies* are less likely to increase deterrence success. Particularly, in strong support of my hypothesis, countries that have formed military alliances with Russia are far more likely to engage in *war* as the highest severity level against their enduring rivalries than otherwise, as indicated by the statistically significant and positive coefficient for *Russian military allies* (β=1.43). Likewise, countries that have formed a military alliance with Russia are likely to engage in *disputes* (*threat, display, and use of military forces*), but having no statistical significance. The coefficient for *Russia's military allies* over *disputes* (β=0.38) remains positive with the complete disappearance of its statistical significance. Military alliances with Russia, therefore, do not inhibit conflict, appearing rather to bring about increased tensions, particularly *war*.

In support of my hypothesis, *Russia's trading partners* have no discernible effect on disputes. As expected, the results from Table 1 indicate that, rather than reducing the likelihood that dyads would engage in militarized disputes, countries that formed trade linkages with Russia would add a boost to increased military tensions, as noted in the positive coefficient for *Russia's trading partners* on *disputes* (β=0.68) and *war* (β=.50). But, their associations are statistically insignificant.

The coefficient for *Russian allies*partners* on *disputes* (β=1.33) which is the combined effect of *Russia's military allies* and *trading partners* remains positive and statistically insignificant, similar to those observed in *Russia's military allies* or *trading partners* on *disputes* and *war*, respectively. Yet, that for *Russian allies*partners* on *war* (β=-6.82) has drastically changed, but only in its direction, turning to a negative sign with statistical insignificance. When a country forms both military alliances and trade relations with Russia,

it is unlikely to engage in *war*, but insufficient to promote peace.

These findings are quite consistent with those from the recent empirical analysis on China (Lee 2020). Russia and China are comparable in regime type and deterrence policy. China is a long-standing autocratic regime, adopting a lean and limited deterrence policy over its military allies. Employing the logit regression analysis on enduring rivalry data set for the period of 1950-2000, the research concluded that there is little evidence that military or economic ties with China are less likely to inhibit conflicts.

The findings from control variables uncover great surprises for those unfamiliar with previous studies. These discrepancies from the previous studies may be reflected from certain characteristics of enduring rivalries on militarized disputes. Dyads with one major power are less likely to engage in *disputes* (β=-.505) with statistically appreciable significance, but more likely in *war* (β=.43) with statistical insignificance. Dyads with greater disparities of power are not associated with both *disputes* (β= -0.02) and *war* (β= -1.31). Between enduring rivalries, proximity has a statistically significant positive effect on the likelihood of *disputes* (β=0.61), which is consistent with that of empirical studies. However, it is less likely to engage in *war* (β= -1.08) with statistical significance, which is anomalous to that of previous studies. Dyads with more democratic states are not associated with *disputes* (β=-0.00) or *war* (β=0.41). The end of the Cold War does not have statistical effect on the probability that dyads will engage in militarized disputes.

Table 2 represents the percentage change of odds of *war* along with the alliance change with Russia. I calculated the marginal effects of the target countries with Russian alliance, demonstrating how an increase from no alliance to an alliance with Russia affects the predicted probability from 1) *disputes* (*threat, display, and use of military forces*) to *war* and 2) *no disputes* to *war,* holding all other variables at their means for continuous ones or zero for dummy ones.

The results reveal that in enduring rivalries when a target country newly forms a military alliance with Russia, initiators are more likely to accelerate *disputes* to *wars* by 186.5%, as indicated by the statistically significant and positive predicted probability. In addition, in enduring rivalries, the statistically significant and positive predicted probability shows that when a target country newly forms a military alliance with Russia, an aggressor is more likely to initiate *war* against the target by 320.1%.

In sum, the critical finding from the statistical analysis is that in enduring rivalries, the statistically significant positive coefficient for *Russia's military alliance* on *war* reveals that countries in the presence of alliance with Russia appear more likely to engage *war.* Yet, the statistically insignificant and positive coefficients for *Russia's trading partners* on *low severity* or *war* disclose that countries in trade linkages with Russia are not associated with militarized disputes.

VI. CONCLUSION: POLICY IMPLICATIONS FOR THE U.S.-N. KOREAN NUCLEAR NEGOTIATION

This paper tests whether extended-general deterrence of Russia over its military allies and trading partners is credible. I assume that the military alliances or trade linkages with Russia work as signals that Russia sends to aggressors its resolve to engage in crisis. I argue that the alliance commitments of Russia's authoritarian leaders to protect their military proteges or trading partners are not believable to aggressors because their commitments are not costly.

Table 2. Percentage change of odds of *war* to Russian alliance change

	Low severity dispute → War	No dispute → War
	Change (%)	Change (%)
Target with Russian alliance	186.5*	320.1***

* p<0.01, ** p<0.001, *** p<0.0001

Also, the deterrence policies of Russia seem ambivalent. The results of the statistical analyses presented here reveal that there is little evidence that countries that have formed military alliances or trade linkages with Russia are more likely to increase deterrence success.

These findings have significant theoretical implications for the research on extended-deterrence and practical implications for Northeast Asian security. In particular, the findings unfold that countries that have formed a military alliance with Russia are more likely to engage in *war.* In theory, the costly signal approach implies that the signal of Russian military alliance is not so costly enough to deter the resolve of initiators against Russian allies because Russia has long adopted the authoritarian regime or not fully consolidated the democratic system. In contrast, some states are so resolved that they take a firm strategic position at the unavoidable cost of war (Fearon 1994, 583). Strongly determined attackers could threaten protégés allied to a defender, taking high risks of war (Huth and Russett 1984, 517). Beyond this simple interpretation based on the causal mechanism of the costly signal approach, testing extended-deterrence faces inherently a methodological problem, implying a potential endogeneity that no countries without external threat or conflict-proneness are motivated to form alliance relations. Countries most likely in conflict-proneness are more motivated and driven to form a military alliance. Hence, the findings presented here are not surprising.

In practice, the findings have profound policy implications on Northeast Asian security, particularly the contemporary U.S. and N. Korean nuclear negotiations. All other things being equal, my findings that there is little evidence on the extended-deterrent power of Russia over its military or trading partners, allow me to provide certain policy prescriptions for the contemporary nuclear talks between the U.S. and N. Korea. The findings presented here could deliver a reasonable explanation about the reason why N. Korea was desperately motivated to obtain nuclear weapons. Also, these findings convey the future trajectory on what could be the possible path of nuclear talks and solutions mutually agreeable between N. Korea and the U.S.

The findings presented here are consistent with those of the existing research that while nuclear threat dissuades nonnuclear states to obtain nuclear weapons through fear of preventive war (Gartzke and Jo 2007, 184), security vulnerability derived from nuclear asymmetry is more likely to contribute to nuclear proliferation. Under security vulnerability in nuclear asymmetry, states by nature have two options, either to obtain their nuclear weapons or to rely on extended deterrence of other nuclear states. The case in point is exactly N. Korea, which was driven to develop a nuclear weapons program. In 1961, N. Korea formed a bilateral military treaty with the nuclear Soviet, which nullified it from 1991 to 2000, emphasizing cooperation with S. Korea. In the lack of a nuclear umbrella of Russia, N. Korea prompted to develop a nuclear weapons program. The existing research contends that the lack of security guarantees by nuclear states increases the willingness to proliferate, even more, accelerated with the unilateral policy of U.S. hegemony and the nuclear umbrella of Russia on the decline (Gartzke and Jo 2007, 187). The findings presented here can well

explain the reason why N. Korea is quite obsessed with security guarantees provided by the U.S., as shown in the recent nuclear talks between the U.S. and N. Korea. Even though N. Korea reentered into the bilateral military treaty with Russia in 2001, it should be a critical mistake should it believe that the extended deterrence of Russia on it is reliable.

On the contrary, is N. Korea more belligerent towards its major competitors, S. Korea, the U.S., or Japan after obtaining nuclear weapons? More explicitly, is N. Korea more likely to commit suicide after successfully developing its self-help system of nuclear and missile capabilities by initiating war against S. Korea and the U.S.? In fact, for the last 70 years, the U.S. foreign policy has been designed and executed based on the underlying assumption that N. Korea is more likely to attack S. Korea and the U.S., which is quite anomalous from the theoretical perspective. Paradoxically, however, since June 2018, when the nuclear bargaining between N. Korea and the U.S. was launched, what most astonishingly strikes the global society is that all those ceaseless enduring militarized disputes between two Koreas are controllable and man-made. N. Korea immediately stopped a series of nuclear tests and missile launches in exchange for the suspension or downsizing of those comprehensive and annual joint military exercises led by the U.S. which are precisely identified with the considerable level of militarized interstate disputes. Yet, N. Korea's nuclear and missile capabilities reachable to the U.S. homeland brought up what structural realists have consistently and exactly predicted: the cold peace of equilibrium of mutual fear between N. Korea and the U.S. As a last isolated balancer, the U.S. has intervened in a decisive crisis of nuclear N. Korea, which is not clear to be seen as a result of its perception change on N. Korea as a normal state, not a rogue anymore. But, it is not easy to believe that the U.S. is still haunted with its deep-rooted assumption that N. Korea is more likely to commit suicide by initiating a nuclear attack on S. Korea or the U.S. “It did in 1950 only after prominent American congressmen, military leaders, and other officials said that we would not fight in Korea. N. Korea’s external behavior has sometimes been ugly, but certainly not reckless, showing no inclination to risk suicide” (Waltz 1995, 39).

In response to a nuclear threat, even more in the lack of reliable ally, which my findings imply, N. Korea has no option other than resorting to nuclear weapons for its security. The U.S. may face significant difficulties in completely denuclearizing N. Korea which is unconditional surrender. N. Korea has disclosed a serious security vulnerability in the lack of credible alliances. Yet, it in return has never lost its autonomy, which led to building internal arms such as nuclear weapons. It is known that N. Korea is quite resolved to obtain security guarantees at the cost of nuclear weapons which otherwise wouldn't give up those weapons. Yet, when the underlying assumption of security maximizer is applied to both the U.S. and N. Korea, nuclear weapons and security assurances are inherently unmatchable. Considered into the cases of the 2003 removal of Saddam Hussein, the 2011 collapse of Libyan Qaddafi regime, and 2014 Russian annexation on the Crimea, these two means may not be exchangeable. So it is quite difficult to imagine that the primary and substantive goal for N. Korea is to seek security assurances committed by the U.S. Eventually, states enhance its security either or both in internal arms and ally reliability, which could be complementary. In the lack of reliable alliance, N. Korea is driven into the hands-tied paradox, which influences outcomes by weakening its position by reducing its options or relinquishing initiatives.

For the last 70 years, the U.S. has undertaken a comprehensive and thorough containment policy against N. Korea. Recently, it has successfully coerced Russia and China, which are defenders and military allies of N. Korea, to join the tough economic sanctions led by the U.N. over N. Korea. Finally, turning aside from the deterrence policy carried out by its

predecessors, the Trump administration triggered the compellent threat with no deadline for automatic engagement, but with preemptive war policy to dismantle N. Korean nuclear weapons. Here, the U.S. successfully cornered N. Korea, leaving it the last clear chance to resist or comply with its policy. Unlike Vietnam which challenged the compellent threat of the U.S., N. Korea complied with the U.S. policy. Yet, the compellent threat of the U.S. seemed quite workable, but only in stopping N. Korea's initiating display of forces, as shown in a series of nuclear weapons testing and missile launch.

The diplomatic negotiations between the two countries would determine how to completely dismantle nuclear weapons of N. Korea. In particular, the nuclear bargaining may reverse the strategic positions between the U.S. and N. Korea. Paradoxically, in the nuclear bargaining, what the U.S. has successfully put N. Korea into a corner in support of Russia and China as well as its compellent threat, is driven into a position where N. Korea no longer have many choices left. Considered into the Soviet compliance during the Cuban missile crisis in exchange for the withdrawal of Turkish missile base, while N. Korean demands may be clearly defined as security assurances, the U.S., the aggressor's demands may have no such obvious definition on N. Korean denuclearization in confusion from grand bargaining in its favor to phased implementation in N. Korean favor. In sum, in the interdependent decision-making process of nuclear bargaining, it is assumed that the U.S. and N. Korea mutually well recognize a variety of options left to the U.S. and no option left to N. Korea. Furthermore, N. Korean nuclear armament is theoretically evaluated as the completion of the equilibrium of power between two hostile coalitions led by the U.S. and China.[5] Considering the Northeast Asian system and its balancing tendencies (Lee, 2016), on all occasions, we should not expect that N. Korea with no credible military allies will fully agree to completely denuclearize unless the U.S. makes considerable concession on N. Korean nuclear capability.

Article Received: 26-10-2020 Revised: 15-12-2020 Accepted: 17-12-2020

REFERENCES

Asal, Victor, and Kyle Beardsley. 2007. "Proliferation and International Crisis Behavior." *Journal of Peace Research,* 44(2): 139-155.

Aydin, Aysegul. 2010. "The Deterrent Effects of Economic Integration. *Journal of Peace Research* 47:5, 523-33.

Beardsley, Kyle and Victor Asal. 2009a. "Winning with the Bomb." *Journal of Conflict Resolution,* 53(2): 278-301.

Beardsley, Kyle and Victor Asal. 2009b. "Nuclear Weapons as Shields." *Conflict Management and Peace Science*, 26(3): 235-255.

Barbieri, Katherine. 2002. *The liberal illusion.* Ann Arbor, MI: University of Michigan Press.

Barbieri, Katherine. 1996. "Economic Interdependence: A Path to Peace or a Source of Interstate Conflict. *Journal of Peace Research* 33:1, 11-28.

Barbieri, Katherine, Omar M. G. Keshk, and Brian Pollins .2009. "Trading Data: Evaluating

[5] In an attempt to build a countering military architecture in Northeast Asia, the nuclear U.S. has extended its nuclear umbrella over S. Korea, Taiwan, and Japan. In contrast, after 1990, nuclear Russia stopped extending its nuclear umbrella over N. Korea. In particular, nuclear China never declared its nuclear umbrella over N. Korea.

our Assumptions and Coding Rules. *Conflict Management and Peace Science* 26:5, 471-91.

Beck, Nathaniel, Jonathan Katz, and Richard Tucker. 1998. "Taking Times Seriously: Time-Series-Cross-Section Analysis with a Binary Dependent Variable. *American Journal of Political Science* 42:4, 1260-88.

Bennett, Scott and Allan Stam. 2004. *The Behavioral Origins of War.* Ahn Arbor, MI: University of Michigan Press.

Bobbit, Philip .2018. "A Helsinki Conference for Asia. Hoover Working Group on National Security, Technology, and Law, Aegis Series Paper No. 1805, April 26, https://lawfareblog.com/helsinki-conference-asia.

Bremer, Stuart A. 1992. "Dangerous Dyads: Conditions Affecting the Likelihood of Interstate War, 1816-1965. *The Journal of Conflict Resolution* 36:2, 309-41.

Bueno de Mesquita, Bruce. 1981. *The War* Trap. New Haven, CT: Yale University Press.

Chiba, Daina, Jesse C. Johhson and Brett Ashley Leeds. 2015. Careful Commitments: Democratic States and Alliance Design." *Journal of Politics* 77(4), 968-82.

Coale, Ansley J. 1985. "Nuclear War and Demographers' Projections. *Population and Development Review,* 11(3): 483-493.

Danilovic, Vesna. 2002. *When the Stakes Are High: Deterrence and* Conflict *among Major Powers.* Ann Arbor; University of Michigan Press.

DeNardo, James. 1995. *The Amateur Strategist: Intuitive Deterrence Theories and the Politics of the Nuclear Arms Race*. NY: Cambridge University Press.

Dixon, William Dixon. 1992. "Democracy and the Peaceful Settlement of International Conflict." *The American Political Science Review* 88:1, 14-32.

Eugene Expected Utility Generation and Data Management Program (Version 3.204). http://eugenesoftware.org/.

Fearon, James D. 1997. "Signaling Foreign Policy Interests: Tying Hands V. Sinking Costs. *The Journal of Conflict Resolution* 41:1, 68-90.

Fearon, James D. 1995. "Rationalist Explanations for War. *International Organization* 49:3, 379-414.

Fravel, M. Taylor and Evan S. Medeiros. 2010. "China's Search for Assured Retaliation: The Evolution of Chinese Nuclear Strategy and Structure. *International Security* 35:2, 48-87.

Freedman, Lawrence. 2004. *Deterrence*. London: Polity Press.

Freedman, Lawrence. 2003. *The Evolution of Nuclear Strategy*. NY: Palgrave Macmillan.

Gaddis, Lewis. 1997. *We Now Know: Rethinking Cold War History.* NY: Oxford University Press.

Gaddis, Lewis. 1987. *The Long Peace: Inquiries into the History of the Cold War*. NY: Oxford University Press.

Gartzke Erik and Quan Li. 2003. "War, Peace, and the Invisible Hand: Positive Political Externalities of Economic Globalization. *International Studies Quarterly* 47:4, 561-86.

Gartzke, Erik Quan Li, and Charles Boehmer. 2001. "Investing In the Peace: Economic Interdependence and International Conflict. *International Organization* 55:2, 391-438.

Geller, Daniel S. 1990. "Nuclear Weapons, Deterrence, and Crisis Escalation." *Journal of Conflict Resolution* 34, 291-310.

Gelpi, Christopher F. and Joseph M. Grieco. 2008. "Democracy, Interdependence, and the Sources of the Liberal Peace. *Journal of Peace Research* 45:1, 17-36.

Gibler, Douglas M. 2009, *International Military Alliances*. CQ Press.
Glaser, Charles L. 1992. "Nuclear Policy without an Adversary. *International Security,* 16(4): 34-78.
Hegre, Havard, John R. Oneal, and Bruce Russett. 2010. "Trade Does Promote Peace: New Simultaneous Estimates of the Reciprocal Effects of Trade and Conflict. *Journal of Peace Research* 47:6, 763-74.
Huth, Paul. 1999. "Deterrence and International Conflict: Empirical Findings and Theoretical Debates. *Annual Review of Political Science* 2, 25-48.
Huth, Paul. 1990. "The Extended-deterrence Value of Nuclear Weapons, *Journal of Conflict Resolution* 34:2, 270-90.
Huth, Paul. 1988. "Extended-deterrence and the Outbreak of War. *The American Political Science Review* 82:2, 423-44.
Huth, Paul and Bruce Russett. 1993. "General Deterrence between Enduring Rivals: Testing Three Competing Models. *American Political Science Review* 87:1, 61-73.
Huth, Paul and Bruce Russett. 1984. What Makes Deterrence Work? Cases from 1900-1980. *World Politics* 36:4, 496-526.
Jervis, Robert. 1988. "The Utility of Nuclear Weapons. *International Security* 13:2, 80-90.
Johnson, Jesse C., Brett Ashley Leeds, and Ahra Wu. 2010. "Alliance Characteristics and Extended General Deterrence. Paper presented at the Annual Meeting of the American Political Science Association, Louisiana, Aug. 30-Sept. 2.
Jones, Daniel, Stuart Bremer, and David Singer. 1996. "Militarized Interstate Disputes, 1816-1992: Rationale, Coding Rules, and Empirical Patterns." *Conflict Management and Peace Science* 15:2, 163-213.
Klein, James P., Gary Goertz, and Paul F. Diel. 2006. "The New Rivalry Dataset: Procedures and Patterns. *Journal of Peace Research* 43:3, 331-48.
Kroenig, Matthew. 2018. "The Case for the US ICBM Force. *Strategic Studies Quarterly,* 12(3): 50- 69.
Kroenig, Matthew. 2013. "Nuclear Superiority and the Balance of Resolve: Explaining Nuclear Crisis Outcomes. *International Organization,* 67(1): 141-171.
Lee, Jae-Bong. 2009. "US Deployment of Nuclear Weapons in 1950s South Korea & North Korea's Nuclear Development: Toward Denuclearization of the Korean Peninsula. Asia-Pacific Journal 7(8), 1–17.
Lee, Jin Myoung. 2020. "Extended Deterrent Effect of China and Its Implications for the U.S.-N. Korean Nuclear Negotiation. *The Korean Journal of Security Affairs* 25:1, 74-95.
Lee, Jin Myoung. 2016. "Balance of Power in Northeast Asia: Path to Peace or Source of Disputes. *Korean Association of International Studies* 56:4, 7-48.
Leeds, Brett Ashley. 2003. "Do Alliances Deter Aggression? The Influence of Military Alliances on the Initiation of Militarized Interstate Disputes. *American Journal of Political Science* 47:3, 427-39.
Mansfield, E. D. and B. M. Pollins, 2001. "The Study of Interdependence and Conflict, *Journal of Conflict Resolution* 45:6, 834-59.
Maoz, Zeev and Bruce Russet. 1993. "Normative and Structural Causes of Democratic Peace, 1946-1986." *The American Political Science Review* 87:3, 624-38.
Marshall, Monty, Ted Robert Gurr, and Keith Jaggers. 2018. "Polity IV Project Dataset Users' Manual v2017: Political Regime Character and Transitions, 1800-2017. *Center for Systemic Peace.*

Mearsheimer, John J. 1990. “Back to the Future: Instability in Europe after the Cold War.” *International Security* 15(1), 5-56.

Morgan, Patrick M. 1977. *Deterrence: A Conceptual Analysis.* Beverly Hills, California; Sage Publications.

Morgan, Patrick M. 1983. *Deterrence: A Conceptual Analysis, 2nd ed*. Beverly Hills, California: Sage Publications.

Morgan, Patrick M. 2003. *Deterrence Now*. Cambridge: Cambridge University Press.

Morrow, James D. 1999. “How could trade affect conflict? *Journal of Peace Research* 36:4, 481-89.

Mueller, John. 1995. *Quiet Cataclysm: Reflections on the Recent Transformation of World Politics.* NY: HarperCollins.

Oberdorfer, Don, and Robert Carlin. 2013. *The Two Koreas: A Contemporary History*. 3rd ed. Philadelphia: Basic Books.

Oneal, John R. and Bruce M. Russett. 1999. “The Kantian Peace: The Pacific Benefits of Democracy, Interdependence, and International Organizations, 1885-1992. *World Politics* 52:1, 1-37.

Oneal, John R. and Bruce M. Russett. 1997. “The Classical Liberals Were Right: Democracy, Interdependence, and Conflict, 1950-1985. *International Studies Quarterly* 41:2, 269-93.

Oneal, John R., Frances H. Oneal, Zeev Maoz, and Bruce Russett. 1996. “The Liberal Peace: Interdependence, Democracy, and International Conflict, 1950-85. *Journal of Peace Research* 33:1, 11-28.

Organski, A. F. K. and Jacek Kugler. 1980. *The War Ledger.* Chicago: University of Chicago Press.

Palmer, Glenn, Vito D'Orazio, Michael Kenwick, and Matthew Lane. 2015. “The Mid4 Dataset, 2002–2010: Procedures, Coding Rules, and Description. *Conflict Management and Peace Science* 32:2, 222-42.

Paul, T. V. 1994. *Asymmetric Conflicts*. Cambridge: Cambridge University Press.

Poast, Paul. 2013. “Can Issue Linkage Improve Treaty Credibility? Buffer State Alliances as a Hard Case.” Journal of Conflict Resolution 57(5), 739-64.

Quackenbush, Stephen L. 2011. “Deterrence Theory: Where Do We Stand. *International Studies* 37(2): 741–762.

Quinlivan, James and Olga Oliker. 2011. *Russia Approaches to a New Environment and Implications for the U.S.* VA: RAND Corporation.

Rapp-Hooper, Mira. 2015. “Absolute Alliances: Extended-deterrence in International Politics. Doctoral Dissertation Columbia University.

Rojansky, Matthew. 2013. “Russia and Strategic Stability. In *Strategic Stability: Contending Interpretations.* Elbridge A. Colby and Michael S. Gerson, eds. Carlisle, PA: US Army War College, 295-342.

Russett, Bruce M., John R. Oneal, and David R. Davis. 1998. “The Third Leg of the Kantian Tripod for Peace: International Organizations and Militarized Disputes, 1950-1985. *International Organization* 52:3, 441-67.

Russett, Bruce M. 1963. “The Calculus of Deterrence,” *Journal of Conflict Resolution* 7:2, 97-109.

Russian Federation Ministry of Defense. 2015. “The Military Doctrine of the Russian Federation. *The Embassy of the Russian Federation to the United Kingdom of Great Britain and Northern Ireland,* June 6. Accessed on August 17, 2020. https://rusemb.

org.uk/press/2029.
Schmemann, Serge. 1993. “Russia Drops Pledge of No First Use of Atom Arms. *The New York Times*, Nov. 4, 1993.
Sechser, Todd S. 2017. *Nuclear Weapons and Coercive Diplomacy*. NY: Cambridge University Press.
Sechser, Todd S. and Matthew Fuhrmann. 2013. “Crisis Bargaining and Nuclear Blackmail.” *International Organization,* 67(1): 173-195.
Shelling, Thomas. 1966. *Arms and Influence.* MA; Yale University Press.
Shelling, Thomas. 1960. *The Strategy of Conflict.* Cambridge, M.A: Harvard University Press.
Signorino, Curtis and Ahmer Tarar. 2006. “A Unified Theory and Test of Extended Immediate Deterrence. *American Journal of Political Science* 50(3): 586-605.
Singer, J. David, Stuart Bremer and John Stuckey. 1972. “Capability Distribution, Uncertainty, and Major Power War, 1820-1965. In *Peace, War, and Numbers.* Bruce Russett, ed. Beverly Hills: Sage, 19-48.
Siverson, Randolph M. and Harvey Starr. 1991. *The Diffusion of War: A Study of Opportunity and Willingness.* Ann Arbor: The University of Michigan Press.
Siverson, Randolph and Michael Tennefoss. 1984. “Alliance, Power, and the Escalation of Conflicts: 1815-1965. *The American Political Science Review* 78:4, 1057-1069.
Smith, Alastair. 1998. “International Crises and Domestic Politics.” *The American Political Science Review* 92:3, 623-38.
Sokov, Nikolai. “The New 2010 Russian Military Doctrine: The Nuclear Angle. *Middlebury Institute of International Studies at Monterey,* February 5, 2020. Accessed on August 17, 2020. https://www.nonproliferation.org/new-2010-russian-military-doctrine/.
Sokov, Nikolai. “Russia’s 2000 Military Doctrine. *Nuclear Threat Initiative,* Oct. 1, 1999. Accessed on August 17, 2020. https://www.nti.org/analysis/articles/russias-2000-military-doctrine/.
Starr, Harvey and Benjamin A. Most. 1976. “The Substance and Study of Borders in International Relations Research. *International Studies Quarterly* 20:4, 581-620.
Stinnett, Douglas M., Jaroslav Tir, Philip Schafer, Paul F. Diehl, and Charles Gochman. 2002. “The Correlates of War Project Direct Contiguity Data, Version 3. *Conflict Management and Peace Science* 19:2, 58-66.
Waltz, Kenneth N. 2000. “Structural Realism after the Cold War. *International* Security 25:1, 5-41.
Waltz, Kenneth N. 1995. “More May Be Better. In *The Spread of Nuclear Weapons: A Debate*. Scott D. Sagan and Kenneth. N. Waltz NY: W. W. Norton and Company, 1-50.
Waltz, Kenneth N. 1993. “The Emerging World Structure of International Politics. *International Security* 18:2, 44-79.
Waltz, Kenneth N. 1998. “The Origins of War in Neorealist Theory.” *Journal of Interdisciplinary History* 18: 615-28.
Weede, Eric. 1983. “Extended-deterrence by Superpower Alliance. *Journal of Conflict Resolution* 27:2, 231-54.
Zagare, Frank C. and D. Marc Kilgour. 2000. *Perfect Deterrence.* NY: Cambridge University Press.

Jin Myoung Lee, Lecturer, Graduate School of Education, Seoul National University of Education, 96 SeochoJoongang-ro, Seocho-gu, Seoul [137-742], Republic of Korea, Email: jmlee4789@gmail.com

International Journal of Korean Unification Studies

For over 20 years, KNU's International Journal of Korean Unification Studies(ISSN 1229-6902) has allowed for active exchange of ideas and information among scholars and experts at home and aborad, sharing knowledge and perspectives on North Korea, unification of the Korean Peninsula and issues of international relations.

Registered with the National Research Foundation of Korea (NRF) as of January 1, 2009, the Journal welcomes submission of manuscripts relevant to the issues of inter-Korean relations, North Korea, Northeast Asian security, and unification of the Kotean Peninsula.

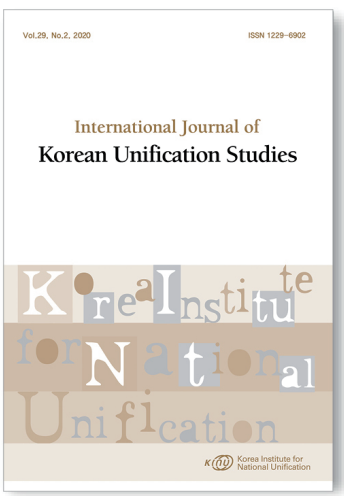
Submission of a paper will be held to the assumption that it contains original unpublished work and is not being submitted for publication elsewhere. All articles published in the Journal are subject to peer-review by relevant experts in the field before they are accepted for publication. We provide honorarium for the articles that have been chosen for publication.

American-English should be used as a standard format, manuscripts should be double-spaced and footnoted with a full list of bibliography specified at the end of the article. The length required for articles should be 6,000-10,000 words in 12-font size in MS word in compliance with the Chicago style. The deadlines for manuscript submission are April 21 for the summer issue (published on June 30) and October 21 for the winter issue (published on December 31).

Vol. 29, No. 2 (2020)

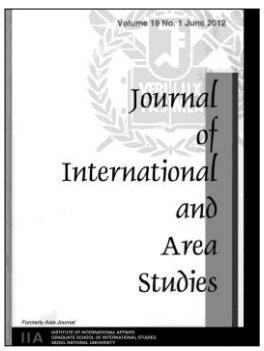
Feature Theme:

Peaceful Coexistence on the Korean Peninsula Amid the COVID-19 Pandemic



Please send your manuscripts via online submission site JAMS at <https://kinu.jams.or.kr> and send inquiries to the e-mail address below:
Korea Institute for National Unification
217, Banpo-daero(Banpo-dong) Seocho-gu, Seoul 06578, Korea
(Tel) (82-2) 2023-8208 (Fax) (82-2) 2023-8298
(Submission) https://kinu.jams.or.kr (E-Mail) kinujournal@kinu.or.kr (Webpage) http://www.kinu.or.kr

Journal of International and Area Studies



Journal of International and Area Studies (JIAS) is the official journal, supported and published by the Institute of International Affairs (IIA), Graduate School of International Studies at Seoul National University. JIAS seeks to publish the best and most thoughtful scholarly reflections on the entire field of international studies. JIAS welcomes articles bearing upon interdisciplinary academic research of International studies, encompassing international commerce, international relations, and studies of any specific region.

Editor: Erik Mobrand

RECENT ARTICLES:

Jaehwan Jung, The Ontology and Causation of Financial Regulatory Paradigm: The Nonreductive Individualism of Macroprudential Regulation; *Jungmoo Woo and Jaechul Lee*, Democracy Incongruence and Protest; *Chong-Sup Kim and Hee-sang Yoon*, Health-Care Networks and the Impact of Maternal Health Care Projects: The Cases of Peru and Bolivia; *Johann Park*, World Democracy and World Development: A Macro-Systemic Level Causal Analysis of Democracy and Economic Development, 1960-2018; *Hoiok Jeong*, Influence of Home and Host Country Factors on Immigrants' Political Engagement; *Changrok Soh, Minwoo Kim and Daniel Connolly*, The Fourth Industrial Revolution, Human Labor and Human Rights; *Jin Myoung Lee*, Extended-Deterrent Effect of Russia and Its Implications for the U.S.-N. Korean Nuclear Negotiation.

Subscribe Today!

ORDER FORM

Please send a completed copy of this form, with the appropriate payment, to the address below.

Subscription Rates: 1 Year (two issues in June and December)

Within Korea □ Individuals: Won 30,000 □ Institutions: Won 60,000

Outside Korea □ Individuals: US $32.00 □ Institutions: US $64.00

Rates include postage. For single issue and back issues, contact JIAS.

Payment enclosed:

□ Check (payable to IIA/JIAS)

□ Direct Transfer to NACFKRSE, SNU Branch,
Account Number 079-01-389261 (Holder: Graduate School of International Studies)

After remitting payment on the on-line system, please send us order form by fax or email.

Delivery address:

First Name:_____ Middle Initial:_____

Last Name:_____ Title:_____

Department/Institution:_____

Street Address:_____

City:_____ Country_____ Post Code_____

Tel:_____ Fax:_____

Institute of International Affairs, GSIS, SNU
1 Gwanak-ro, Gwanak-gu, Seoul 08826, Republic of Korea

TEL: +82-2-880-8975
FAX: +82-2-884-9352

Website: http://iia.snu.ac.kr
E-Mail: jias@snu.ac.kr